

1. Record Nr.	UNINA9910969827703321
Titolo	Telomeres : function, shortening and lengthening // Leonardo Mancini, editor
Pubbl/distr/stampa	New York, : Nova Biomedical Books, c2009
ISBN	1-60876-720-5
Edizione	[1st ed.]
Descrizione fisica	1 online resource (498 p.)
Altri autori (Persone)	ManciniLeonardo
Disciplina	572.8/7
Soggetti	Telomere Telomerase
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Telomere dynamics and biology in human progeroid syndromes / Terence Davis, Hannah S.E. Tivey, and David Kipling -- The role of telomere-telomerase system in age-related fitness decline : a tameable process / Giacinto Libertini -- Cytogenetic evaluation of telomere dysfunction : chromosomal aberrations involving telomeres and interstitial telomeric sequences / Alejandro D. Bolzan -- Telomeres-telomerase biology and their role in renal and other chronic diseases / Kordinas Vasileios ... [et al.] -- Telomerase and telomere dynamics in cancer : clinical application for cancer diagnosis / Eiso Hiyama, Keiko Hiyama -- Telomeres and chromosome segregation / Antonella Sgura and Daniela Cimini -- Telomere-based genome-protective responses : a mammalian improvement on the bacterial SOS response? / Barbara A. Gilchrest, Mark S. Eller -- Telomere lengthening from oocyte to embryonic stem cell / Eva Pericuesta ... [et al.] -- Transcriptional activity at the telomeres of chironomus (diptera) : its possible role in the lengthening of the telomeres / J.L. Diez ... [et al.] -- Telomerase activity : application to diagnosis of human carcinoma / Liliana N. Guerra -- Telomere shortening in diabetes mellitus / Nicholas Tentolouris, Athanasia Papazafiropoulou -- Do alterations in the three-dimensional organization of telomeres indicate malignant transformation? / Sandrine Lacoste, Hans Knecht, and Sabine Mai -- Telomeres : function, shortening and lengthening / Barry Flanary -- Telomerase regulation in stem cells : how to flip the switch? / Rich

Allsopp -- Telomere maintenance mechanisms in bone and soft tissue tumors / Toshihiro Matsuo ... [et al.] -- Genetic polymorphisms of human telomerase reverse transcriptase (hTERT) : mini review / Yumiko Matsubara, Mitsuru Murata, and Yasuo Ikeda -- Genetic inhibition of telomere lengthening in cancer prevention and treatment / F. Mathias Bollmann -- Telomeres : function, shortening, and lengthening / Barry Flanary -- Clinical implications of telomerase activity in human brain tumors / Hyoung-Joon Chun ... [et al.].

Sommario/riassunto

Telomeres are a region of repetitive DNA at the end of chromosomes, which protects the end of the chromosome from destruction. They protect chromosome ends from degradation and thus prevent chromosome end fusion. This book describes the relevance of telomeres in the human aging process and the telomere defects that play a role in the premature aging process. Dysfunctional telomeres that can promote chromosome instability, leading to DNA amplifications and terminal deletions-, cell cycle arrest and cell death, are also described. The biology and function of both telomeres and telomerase are described in this book. The possible connection between telomeres, ageing and senescence, as well as the many disorders and chronic diseases where telomere biology seems to be important are addressed, as well as future therapeutic perspectives. The importance of this enzyme in cancer is reviewed in this book. The data of various kind of cancers are discussed, in addition to the clinical application of telomere and telomerase in human cancer. The role of telomere dysfunction in apoptosis and senescence, as well as its role in newly proposed models that link telomere loss to chromosome missegregation in mitosis, are explained. Characteristic differences of telomere lengthening during oocyte and spermatozoa growth(during embryo development) is also reviewed as well as the transcriptional activity at the telomeres of Chironomus (Diptera) and its possible role in the lengthening of the telomeres. Telomere shortening in Diabetes Mellitus is also described, as well as its association with hypertension, diabetes mellitus, insulin resistance, obesity and cardiovascular mortality. The notion that alterations in the three-dimensional organization of telomeres may cause malignant transformation is also addressed.
